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Atty Dkt No. GP-303217 (GM0404PUS)

REMARKS

The following remarks are intended to be fully responsive to the Office Action mailed March 1, 2005. Claims 1-15 are pending. Claims 4-7 and 12-15 are withdrawn from consideration. Claims 1-3 and 8-11 are finally rejected under 35 U.S.C. 102(b) as being anticipated by Reichenberger, U.S. Patent No. 4,078,628.

SUMMARY

In the Amendment filed January 26, 2005, Applicants noted that the reference cited by the Examiner fails to disclose all the elements and limitations of Applicants claims, and therefore the rejections under 35 U.S.C. § 102(b) are improper. With respect to a by-wire braking system, a controller, and a steering column extending to an engine compartment, the Examiner responds in the present Office Action that such features are inherently present in Reichenberger. However, Applicants respectfully submit that the Examiner has misapplied the requirements necessary for a proper determination of inherency.

With respect to a "by-wire braking system," recited by claims 1 and 8, the Examiner merely states that "it is inherent that a brake-by-wire type system does not exclude hydraulic brake system," but fails to show that the braking system of Reichenberger is necessarily a by-wire braking system.

With respect to a "rotatable steering shaft extending from the passenger compartment to the engine compartment," as recited by claim 8, and with respect to "a controller," as recited by claim 9, the Examiner merely cites patents that purport to show the claimed feature. However, citing a patent in which the claimed feature is purportedly disclosed does not fulfill the requirement, necessary for a finding of inherency, that the feature is necessarily present in the § 102 reference, i.e., Reichenberger.

With respect to a "steering hand wheel" and a "braking ring" being "characterized by a common axis of rotation," as recited by claims 3 and 11, the Examiner states that the "phrase 'common axis of rotation' does not mean that" an

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element must be rotatable. However, as noted below, an object characterized by an axis of rotation is, by definition, rotatable.

DISCUSSION

In the Amendment filed January 26, 2005, Applicants noted that independent claims 1 and 8 recite a vehicle comprising "a by-wire braking system responsive to electronic control signals," and that Reichenberger does not disclose a by-wire braking system. Rather, the Reichenberger reference states that "[l]inear actuator 30 is mechanically connected to the existing automotive brake system 32..." at column 2, lines 24-25. (emphasis added). The words "by-wire" do not appear anywhere in the Reichenberger specification.

In Section 4 of the Office Action mailed March 1, 2005, the Examiner, in responding to Applicants' arguments, states that "Reichenberger disclosed that the braking system is an electro-hydraulic control system (see col. 2, lines 61-668 [sic] and col. 3, lines 1-2). It is inherent that a brake-by-wire type system does not exclude hydraulic brake system. . . ." (underlining added for emphasis).

The relevant issue in a rejection based on 35 U.S.C. §102(b) is whether the cited reference discloses, either *expressly* or *inherently*, all the elements and limitations of the claim. See MPEP § 2131. Applicants noted in the Amendment of January 26, 2005 that Reichenberger does not *expressly* state that the braking system is "by-wire." Further, with respect to whether Reichenberger inherently discloses a "by-wire" braking system, it is irrelevant that "a brake-by-wire type system does not exclude hydraulic brake system," as stated by the Examiner; rather, in a rejection under § 102, the issue is whether Reichenberger inherently discloses a "by-wire" brake system, that is, whether the braking system 32 of Reichenberger is necessarily by-wire.

Applicants refer the Examiner to MPEP § 2112, which addresses inherency. To rely on the inherency of a claimed element or feature in a prior art reference, the Examiner must provide extrinsic evidence that the claimed element or

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feature is **necessarily** present in the reference. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted). The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). See MPEP § 2112.

The Examiner has not provided extrinsic evidence that "make[s] clear" that the braking system 32 of Reichenberger is necessarily "by-wire," as required by the Federal Circuit in *In re Robertson* for a proper determination of inherency. Similarly, the Examiner has not provided a basis in fact or technical reasoning to support a determination that the braking system of Reichenberger is necessarily by-wire, as required by the Board of Patent Appeals and Interferences in *Ex parte Levy* for a proper determination of inherency. Instead, in stating that "It is inherent that a brake-by-wire type system does not exclude hydraulic brake system," the Examiner is merely stating that by-wire braking systems could be hydraulic, such as the hydraulic brake system 32 of Reichenberger. However, this is not the equivalent of showing the braking system of Reichenberger is necessarily by-wire.

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Accordingly, independent claims 1 and 8 are not anticipated by Reichenberger and are in condition for allowance. Claims 2-3 ultimately depend from claim 1 and are allowable for at least the same reasons that claim 1 is allowable.

In the Amendment filed January 26, 2005, Applicants noted that dependent claim 3 additionally recites a vehicle comprising a steering hand wheel and a braking ring "wherein the steering hand wheel and the braking ring are characterized by a common axis of rotation." Reichenberger does not disclose that "control wheel 12" is rotatable, and thus does not disclose that steering wheel 10 and control wheel 12 "are characterized by a common axis of rotation," as recited by claim 3.

In Section 4 of the Office Action mailed March 1, 2005, the Examiner states that "[t]he phrase 'by a common axis of rotation' does not mean that 'control wheel 12' has to be rotatable." However, Webster's New Universal Unabridged Dictionary (1996) provides as definition 1 of "axis": "the line about which a rotating body, such as the earth, turns." (underlining added for emphasis). Thus, Applicants submit that for a member to have an "axis of rotation," the member must by definition be rotatable. Since Reichenberger does not disclose that control wheel 12 is rotatable, Reichenberger does not disclose that wheel 10 and wheel 12 have a "common axis of rotation."

Accordingly, dependent claim 3 is not anticipated by Reichenberger and is in condition for allowance.

Applicants' independent claim 8 also recites "a steering column including a rotatable steering shaft extending from the passenger compartment to the engine compartment." Reichenberger does not disclose such a steering shaft.

The Examiner, in Section 4 of the Office Action mailed March 1, 2005, states that "it is inherent that the steering shaft extends from the passenger compartment to the engine compartment as disclosed by fig. 1-2 of W. Engler (US 2,539,994)." As noted above, to rely on the inherency of a claimed element or feature in a prior art

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reference, the Examiner must provide extrinsic evidence or technical reasoning that the claimed element or feature is necessarily present in the reference. However, in citing US 2,539,994, the Examiner merely provides an example of an application in which a steering column purportedly extends from a passenger compartment to an engine compartment. However, providing an example (in the form of a patent) in which a feature is purportedly disclosed does not satisfy the requirement that the extrinsic evidence show that the element or feature is necessarily present in the §102 reference, i.e., Reichenberger.

As noted by the Applicants in the Amendment filed January 26, 2005, there are numerous vehicles where a steering column does not extend into an engine compartment. For example, in rear-engine vehicles, i.e., vehicles with the engine behind the passenger compartment, the steering column does not extend rearward to an engine compartment, but rather is operatively connected to the front wheels. Accordingly, it is not necessary, and therefore not inherent, that any steering column that may be present in Reichenberger extends from a passenger compartment to an engine compartment.

Accordingly, the Examiner has not shown that a steering shaft extending from a passenger compartment to an engine compartment is necessarily present in Reichenberger.

In the Amendment filed January 26, 2005, Applicants' noted that claim 9 recites a vehicle comprising "a controller configured to generate a plurality of actuator control signals in response to said electronic braking control signals and said sensor signals," and that the Reichenberger reference does not disclose such a controller. In Section 4 of the Office Action mailed March 1, 2005, the Examiner states that it "is inherent that the brake system should have a controller as disclosed by Sawada (US 6,234,588) see col. 1, lines 34-38." However, similar to the Examiner's finding of inherency regarding a steering column extending to an engine compartment, the Examiner has not provided extrinsic evidence or a basis in fact or technical reasoning that the braking system 32 of Reichenberger necessarily has a controller; rather, the Examiner

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has merely provided an example of a braking system that has a controller, i.e., Sawada (US 6,234,588). Accordingly, the Examiner failed show that a controller as recited by claim 9 is inherently described in Reichenberger. Claims 10-11 ultimately depend from claim 9 and are allowable for at least the same reasons that claim 9 is allowable.

Applicants' dependent claim 11 additionally recites a vehicle comprising a steering hand wheel and a braking ring "wherein the steering hand wheel and the braking ring are characterized by a common axis of rotation." Reichenberger does not disclose such a device for the same reasons identified hereinabove with respect to dependent claim 3.

CONCLUSION

The remarks in support of the rejected claims are believed to place this application in condition for allowance, which action is respectfully requested

Respectfully submitted,

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